

## **Satellite Imagery Analyses of the Mississippi River: A Map Series from Headwaters to the Gulf of Mexico**

Ricardo D. Lopez  
Ecologist  
ORD/NERL/ESD/LEB  
(702) 798-2394  
lopez.ricardo@epa.gov

**Key Words:** Mississippi River, remote sensing, vulnerability, landsat, stakeholders

The purpose of the Mississippi River map series is to provide the U.S. Army Corps of Engineers with a comprehensive and contemporary view of the Mississippi River, and to provide a basis for identifying ecological vulnerability throughout the Mississippi River Basin. The current map series components consist of several printable posters, which have a nominal scale of 1 inch = 3 miles. We optimized the number and size of the presentations to provide detail in the images, and are using the underlying Landsat imagery to explore the presence of persistent available nesting habitat for the least tern (*Sterna antillarum*), an endangered bird species. A miniature scale poster set is also included on a compact disc for quick reference for managers and for field activities throughout the river basin. This remote sensing product has been actively used by the U.S. Army Corps of Engineers, The Nature Conservancy, Ducks Unlimited, and other important stakeholders in the river basin. This map series is an important first step toward developing a system-wide approach to understanding the functioning of large rivers at a landscape scale. [Leads: R. Lopez/D. Heggem (ORD/NERL/ESD)].